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2900 NW 14<sup>th</sup> Place  
Gainesville FL 32605-5044  
December 17, 2003

Application No. : 09/507,574  
Applicant: Alex E. S. Green  
Filing Date: February 18, 2000  
Group Art Unit: 1764  
Examiner: Jennifer A. Leung  
Docket No.: formerly GRE-100C2

Commissioner for Patents  
P. O. Box 1450  
Alexandria VA 22313-1450


Sir:

In response to Office action of August 18, 2003, please amend the above-identified application as follows:

**Remarks/Arguments** begin on page 2 of this paper.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 3 of this paper.

Very Sincerely Yours,

  
Alex E. S. Green

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## AMENDMENT

In response to Office action of 08/18/2003 claims 1-36 are withdrawn and new claims 37-48 are added that reflect the simple variation of US Patent 6,048,374 (374) that was intended by the inventor. In particular the variation is the simplification of Figure (374)-4 that is here shown in Figure 1. In this alternative embodiment grate 7 in Figure (374)-4 is replaced by a solid plate so that chamber 11 becomes a pressure vessel-char-ash collector. Again the hot char ash extrudes out the bottom of the reactor into the char/ash collector or chamber 11. In this embodiment as the pressure builds up in the pressure vessel the gases and vapors that were generated in the auger reactor can only flow upwards, through the incoming feedstock in the hopper 10. Here the most condensable gases (tars) are condensed and the remaining hot gases pass into separator 27. The separator system uses state of the art processes to perform various functions depending upon the intended application of the output gas or liquid. In Figure (374)-4 channel 55 is used to provide auxiliary gaseous fuel for the combustion chamber. In this alternative embodiment channel 55 is used to provide the primary fuel for the pyrolysis process. Channel 31, when used, can provide air, oxygen, steam, carbon dioxide or other known char gasification agents to reduce the carbonized residual.

## Remarks/Arguments

Regarding the citation to Tarman the withdrawal of claims 1-36 should accommodates the objections in the office action of. In addition Tarman relies upon heat supplied internally by combustion of some of his solid feedstock as in many traditional substoichiometric gasifiers. On the present invention relies primarily on indirect heating of the feedstock through the reactor wall 3 and the heat is provided in this amendment by combustible gases introduced into the combustion chamber 6 through orifice 55 with air provide by blower 9. As to the citation to